Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-27 (Cancelled).

28.   (Currently amended) A method of computing the <u>mean-square-error (</u>MSE<u>)</u> noise of a line in a <u>Digital Subscriber Line (DSL)</u> system, the method comprising:

estimating the Hlog function of the line;

obtaining the <u>power spectral density (</u>PSD<u>)</u> function of the line;

obtaining the <u>signal to noise ratio (</u>SNR<u>)</u> function of the line;

computing the MSE noise by subtracting the SNR from the sum of the PSD and Hlog;
    and

storing or recording the computed MSE noise in a memory.

29.   (Currently amended) The method of Claim 28 wherein <u>obtaining </u>the SNR function ~~is~~ ~~directly reported~~ comprises computing a SNR function or collecting a reported SNR function.

30.   (Currently amended) The method of ~~Claim 28~~, <u>Claim 29,</u> wherein the SNR function is computed based on at least one of the following:

reported past bit distributions;

reported current bit distributions;

an initial PSD;

an Hlog function; or

<u>quiet line noise (QLN)</u>.

31.   (original)   The method of Claim 28 wherein obtaining the PSD function comprises estimating a PSD function or collecting a reported PSD function.

32.   (currently amended)   The method of Claim 28 wherein estimating the Hlog function of the line comprises ~~at least one of the following~~:

~~the method of Claim 33, wherein Hlog is a model parameter; or~~

~~the method of Claim 21~~

generating a plurality of attenuation data points, wherein each attenuation data point
    corresponds to a different frequency carrier mask and comprises an attenuation value,
    further wherein generating a single attenuation data point comprises:

        setting a data-bearing frequency carrier mask;

        transmitting data using one or more frequencies in the carrier mask;

        receiving an attenuation value for the transmitted data; and

        plotting the attenuation value; and

performing at least one of the following:

        storing at least one of the following:

                each generated attenuation data point; or

                each plotted attenuation values; or

    generating a graphical depiction of the estimated Hlog function based on the plurality of generated attenuation data points.

33.-48. (Cancelled)

49. (New) The method of Claim 28 wherein estimating the Hlog function of the line comprises:
        prompting the DSL system to generate operational data, wherein prompting the DSL
            system to generate operational data comprises:

setting an operational mode for the DSL system based on one or more of the
model parameters; and

operating the DSL system using the set operational mode to generate the
operational data;

collecting the generated operational data;

using the collected operational data to generate one or more model parameter values; and

recording or storing one or more of the generated model parameter values in a memory,
wherein Hlog is a model parameter.

50. (New) A Digital Subscriber Line (DSL) system estimator for computing the mean-square-
error (MSE) noise of a line in a DSL system, the estimator comprising:

means for obtaining the power spectral density (PSD) function of the line;

means for obtaining the signal to noise ratio (SNR) function of the line;

estimating means configured to estimate an Hlog function of the line;

computing means coupled to the estimating means and configured to compute the MSE
noise by subtracting the SNR from the sum of the PSD and the Hlog; and

means for storing or recording the computed MSE noise in a memory.

51. (New) The DSL system estimator of claim 50, wherein the means for obtaining the SNR
function further comprises a collecting means configured to collect a directly reported SNR
function.

52. (New) The DSL system estimator of Claim 50, wherein the means for obtaining the SNR
function further comprises:

a computing means configured to compute the SNR based on at least one of the
following:

a reported past bit distribution;

a reported current bit distribution;

an initial PSD;

an Hlog function; or

quiet line noise (QLN).

53.(New) The DSL system estimator of Claim 50, wherein the means for obtaining the PSD function further comprises an estimating means configured to estimate a PSD function or collecting means configured to collect a reported PSD function.

54. (New) The DSL system estimator of Claim 50, wherein the estimating means configured to estimate the Hlog function of the line further comprises:

    a means for generating a plurality of attenuation data points, wherein each attenuation data point corresponds to a different frequency carrier mask and comprises an attenuation value, further wherein a means for generating a single attenuation data point comprises:

        means for setting a data-bearing frequency carrier mask;

        means for transmitting data using one or more frequencies in the carrier mask;

        means for receiving an attenuation value for the transmitted data; and

        means for plotting the attenuation value; and

    a means for performing at least one of the following:

        storing at least one of the following:

            each generated attenuation data point; or

            each plotted attenuation values; or

        generating a graphical depiction of the estimated Hlog function based on the plurality of generated attenuation data points.

55. (New) The DSL system estimator of Claim 50, wherein the estimating means configured to estimate the Hlog function of the line further comprises:

means for prompting the DSL system to generate operational data, wherein prompting the DSL system to generate operational data comprises:

> setting an operational mode for the DSL system based on one or more of the model parameters; and

> operating the DSL system using the set operational mode to generate the operational data;

means for collecting the generated operational data;

means for using the collected operational data to generate one or more model parameter values; and

means for recording or storing one or more of the generated model parameter values in a memory, wherein Hlog is a model parameter.

56. (New) A computer program product comprising a machine readable medium upon which is stored instructions for computing the mean-square-error (MSE) noise of a line in a Digital Subscriber Line (DSL) system, the instructions comprising:

estimating the Hlog function of the line;

obtaining the power spectral density (PSD) function of the line;

obtaining the signal to noise ratio (SNR) function of the line;

computing the MSE noise by subtracting the SNR from the sum of the PSD and Hlog; and

storing or recording the computed MSE noise in a memory.

57. (New) The computer program product of Claim 56, wherein the SNR function is directly reported.

58. (New)The computer program product of Claim 56, wherein the SNR function is computed based on at least one of the following:

reported past bit distributions;

reported current bit distributions;

an initial PSD;

an Hlog function; or

quiet line noise (QLN).

59. (New)The computer program product of Claim 56, wherein obtaining the PSD function comprises estimating a PSD function or collecting a reported PSD function.

60. (New)The computer program product of Claim 56, wherein estimating the Hlog function of the line comprises:

    generating a plurality of attenuation data points, wherein each attenuation data point

        corresponds to a different frequency carrier mask and comprises an attenuation value,

        further wherein generating a single attenuation data point comprises:

            setting a data-bearing frequency carrier mask;

            transmitting data using one or more frequencies in the carrier mask;

            receiving an attenuation value for the transmitted data; and

            plotting the attenuation value; and

    performing at least one of the following:

        storing at least one of the following:

            each generated attenuation data point; or

            each plotted attenuation values; or

    generating a graphical depiction of the estimated Hlog function based on the plurality of generated attenuation data points.

61. (New) The computer program product of Claim 56, wherein estimating the Hlog function of the line comprises:

7

prompting the DSL system to generate operational data, wherein prompting the DSL
system to generate operational data comprises:

setting an operational mode for the DSL system based on one or more of the
model parameters; and

operating the DSL system using the set operational mode to generate the
operational data;

collecting the generated operational data;

using the collected operational data to generate one or more model parameter values; and

recording or storing one or more of the generated model parameter values in a memory,
wherein Hlog is a model parameter.